

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.

Ay  
Cof

Ag 84 PRO  
Cop. 2

TR 596

U. S. DEPT. OF AGRICULTURE  
NATIONAL AGRICULTURAL LIBRARY

OCT 21 1968

~~DO NOT PUBLISH ABSTRACTS~~



# AFRICAN HORSESICKNESS

*an old disease—a new menace*



# AFRICAN HORSESICKNESS

*an old disease—a new menace*



- ORIGINAL AREA OF INFECTION
- PERIODIC
- REPORTED 1959
- REPORTED 1960
- REPORTED 1965-66
- DISEASE NOT KNOWN TO OCCUR

**A**FRICAN HORSESICKNESS is a highly infectious virus disease of horses, donkeys, mules, and other equines. The disease is spread by biting insects. It often kills up to 95 percent of the animals that become infected.

Horsesickness does not affect humans.

## WHERE IT OCCURS

Horsesickness occurs in many parts of Africa; the entire continent is a potential source of the disease. Horsesickness has also been reported in Asia and in the Iberian Peninsula of Europe. It has not been found in the Americas or Australia.

The disease has been known in Africa for several hundred years. In 1959, horsesickness began to

sweep across the Middle East—from Saudi Arabia north through Turkey and east through India. In 2 years, it killed about 300,000 horses, donkeys, and mules. Heavy losses occurred in Algeria in 1965 and in Morocco and Tunisia in 1966.

Europe's first outbreak was reported from southern Spain in 1966.

## HOW IT SPREADS

The disease is spread by tiny gnats (*Culicoides*) and possibly by other biting insects. These insects are active from twilight until dawn. Stabling animals at night reduces the chances of infection.

*Culicoides* are found throughout the world; many species occur in the United States. They are capable of traveling long distances in air currents, or in trains, ships, and planes.

Gnats pick up the horsesickness virus by biting an infected horse, and then spread the disease by subsequent attacks on susceptible animals.

African horsesickness is not contagious and cannot be spread by direct contact between infected and uninfected equines.

The disease can be introduced into new areas in two ways:

- By virus-carrying insects.
- By infected horses, mules, and donkeys, which act as reservoirs of disease. When infected animals are moved into horsesickness-free areas, native gnats soon pick up the virus and begin spreading the disease.

## SIGNS OF HORSESICKNESS

Signs of horsesickness are extremely variable, because the disease occurs in four forms.

Severe signs may develop in infected horses, and in acute cases, animals die within 5 days. Mules and donkeys may have such mild infections that the disease goes unnoticed. Consequently, in an area with many mules and donkeys but few horses, horsesickness may be spread widely before it is diagnosed.

There is no effective treatment for animals acutely affected with horsesickness.

### Pulmonary form

In the pulmonary form, the lungs are seriously affected and are often filled with fluid. Generally, distinct signs of acute respiratory difficulty appear within 3 or 4 days of infection. Breathing becomes labored and rapid; there is a distinct rise in temperature.

As the disease progresses, the animal is seized by fits of coughing, and may discharge large quantities of yellowish fluid from the nostrils. The head and neck are extended, ears droop, and sweating is severe. Curiously, an affected animal may eat until shortly before death. Finally, the



*After a fit of coughing, an animal with African horsesickness discharges yellowish fluid from its nostrils.*

animal chokes, staggers, and falls, discharging a great volume of frothy material from its nose and mouth.

If an affected animal recovers, it continues to have difficulty in breathing for a long time after other signs of horsesickness disappear.

### Cardiac form

In cardiac horsesickness, signs develop more slowly and may last as long as 12 days. Recovery is more common than in the pulmonary form. The animal's heart is affected; the heart sac may be partially filled with fluid. Distinct swellings of the head, neck, and chest are classical signs of the disease. The area above the eyes, the eyelids, and the lips become swollen with accumulated fluid. Small, well-defined hemorrhages develop on eye membranes.

A characteristic of horsesickness can be clearly shown by pressing a finger against a swelling for a few seconds. The fluid immediately flows into

*Heavy accumulation of fluids in the area above the eye causes swelling typical of African horsesickness (left). Hemorrhages develop on eye membranes (right).*



nearby tissues. As soon as the pressure is removed, the fluid returns to the original site.

Infected animals show signs of abdominal pain, but do not lose their appetites. In fatal cases, there are distinct signs of heart failure.



*Eyes and eyelids swell; fluids also cause swellings in the head and neck.*

#### *Mixed form*

The mixed form of horsesickness affects the lungs and heart. The disease develops rapidly.

Affected horses often breathe with difficulty and develop characteristic swellings. Signs typical of other forms of horsesickness may appear.

The death rate is variable. In some outbreaks, death losses are high; in others, many of the affected animals recover.



*Some infected horses become emaciated, although they continue to eat.*

#### *Mild form*

The mild form of the disease, sometimes called horsesickness fever, frequently is undetected. The only indications of infection may be a brief rise in temperature, an accelerated pulse, slightly labored breathing, and some loss of appetite. Animals recover quickly.



*After choking, staggering, and falling, a dying horse discharges a great volume of frothy material from its nostrils and mouth.*

## HOW THE UNITED STATES PROTECTS ITS ANIMALS

The U.S. Department of Agriculture maintains a constant alert to protect American livestock from foreign animal diseases, including African horsesickness.

Because of African horsesickness, restrictions are placed on imports of equines from Africa, the Iberian Peninsula, and an area extending from Africa to Turkey and East Pakistan. Equines from restricted areas can be imported *only* through the port of New York. This includes all equines that originate in restricted areas, as well as all equines that move through or land in restricted areas within 60 days of shipment to the United States. At New York, imported equines are kept under observation in a USDA insect-controlled facility for 60 days.

## CONTROL

If African horsesickness were to get past our guard, or if it were to gain entrance into the Western Hemisphere, it would have little difficulty in finding susceptible horse, mule, and donkey hosts. Then—unless effective controls were employed—African horsesickness might become widely distributed by native insects. The rapid explosion of the disease outside the African continent illustrates how devastating horsesickness can be among highly susceptible, previously unexposed horses.

Control requires early recognition of the signs of horsesickness and prompt notification of authorities. A full-scale State-Federal eradication program will be undertaken immediately if the disease

is diagnosed in this country. The program should—

- Require immediate slaughter and burial of all infected animals.
- Restrict movement of animals from suspected as well as known areas of infection.
- Apply insect-control measures—including the treatment of ponds, lakes, slow-moving water, and other breeding places—in the affected area.
- Make regular use of insecticide sprays for animals, stables, and barns.
- Provide for the stabling of horses in the affected area at night, to guard them against the bites of night-flying insects.

## HOW YOU CAN HELP

- Know the signs of African horsesickness.
- Examine your horses, donkeys, and mules regularly; look for abnormal conditions.
- Protect all animals from biting insects.
- If you find animals with signs of horsesickness, isolate them in well-screened quarters. Notify your veterinarian, State or Federal animal-disease-control-officials, or county agricultural agent at once.
- Do not move animals off your farm when an unfamiliar or undetermined respiratory disease occurs.
- If horsesickness is diagnosed in your herd or in your area, cooperate with disease-control officials and your neighbors to get rid of the disease.

---

*This is one of a series of publications designed to acquaint American livestock men with foreign animal diseases and the steps to take if an outbreak is suspected.*

*If you want more information about foreign animal diseases, contact your local veterinarian, your county agent, or State or Federal animal-disease-control officials.*

---

*Prepared by Animal Health Division and Animal Disease and Parasite Research Division, Agricultural Research Service*

Washington, D.C.

Revised July 1968

For additional copies, send a post card requesting PA 596, "African Horsesickness," to U.S. Department of Agriculture, Washington, D.C. 20250. Include name, address, ZIP code.